Division of Data Processing Technical Bulletin

Number: 0108
Issued Date: February 2, 1990
Effective Date: February 9, 1990
Section/Groups:
Submitted By:
Approved By: Leon Miller

ADABAS Version 5.1.4

Our current release of ADABAS on production database systems is version 4.1.9. A new version, ADABAS 5.1.4 will be installed on these systems on February 9 and 11, 1990. The database systems and the dates of installations are listed below.

Database	Description	Install Date
ADABASAT	Acceptance Test	February 9
ADABASTR	Training	February 9
ADABASGG	General Government	February 11
ADABASCJ	Criminal Justice	February 11
ADABASHS	Human Services	February 11

The new version will use new load and parameter datasets, a new SVC number, and different control parameters for Prefetch. Customers who maintain their own JCL and/or PROCS that reference ADABAS load or parameter datasets, SVC, or use Prefetch will need to change their JCL and parms. Differences between Version 4 and Version 5 are listed below.

	V4	V5
Load Dataset	DB.ADABAS.V411.ADALOAD	DB.ADABAS.LOAD
Parameter Dataset	DB.ADABAS.V411.TESTJCL	DB.ADABAS.PARM
SVC Number	230	231

An explanation of V5 perfetch parameter statements is attached to this bulletin. Batch natural procs that use prefetch use parameter statements in DB.ADABAS.PARM(RUNPRF).

Batch natural procs will be changed by the DBA staff. Their names will not be changed. Procs to be changed are listed.

NSSBGG	NSSBHS	NSSBCJ
NSSBGGPF	NSSBHSPF	NSSBAT
		NSSBTR

Databses will not be available for customer use on the date of installation. Installation time will be 9:00 a.m. to 5:00 p.m. on February 9, 1990 and 8:00 a.m. to 1:00 p.m on February 11, 1990.

Questions concerning these changes should be directed to the DBA Staff.

Using the PREFETCH Option

It is often necessary for a user to process large amounts of data in sequential order, thereby resulting in programs which have long execution times. The ADABAS PREFETCH feature significalntly reduces the execution times of such programs by reducing the number of ADABAS calls and therefore the number of physical I/O operations.

PREFETCH Processing Method

PREFETCH is effective for programs which use sequential commands (L1/L4 with GET NEXT, L2/L5, L3/L6, L9). When using PREFETCH, a series of sequential read commands requires only one ADABAS call. This single call cuases several records to be read at a time from the data base. This results in a significant reduction in interregion communications overhead and also permits the overlapped operation of the user program and the ADABAS nucleus. Note that PREFETCH can only be used in multi-user mode.

Invoking the PREFETCH Feature

Note: An alternative method of invoking PREFETCH is available. Plese confer with your DBA before invoking PREFETCH with the ADABAS command option ‘P’.

The PREFETCH feature is invoked by specifying the value ‘P’ in the Command Option 1 field for any of the commands L1/L4, L2/L5, L3/L6 and L9.

An ISN buffer must also be defined within the user program. ADABAS uses this buffer as an intermediate storage area for a block of records. Each record in the ISN buffer is preceded by a 16-byte header:

Byte	Usage
1-2	Length of Record (inclusive length definition). A length of zero indicates end of data.
3-4	Nucleus Response Code
5-8	Nucleus Internal ID
9-12	ISN of the Record
13-16	ISN Quantity (L9 command only)

The first record is provided by ADABAS in the record buffer (withot 16-byte header). The user must then process additional records from the ISN buffer.

Additional Considerations

The following additional considerations are applicable when using the PREFETCH optin:

1. The record buffer size should be set just large enough to contain the largest decompressed record.
2. The ISN Buffer size must be set to multiples of (RBL+16-byte header + two-byte end characters). For example, an 80-byte RBL in the Control Block is 100 bytes.
3. If the sequential pass of a file is not to be continued until end-of-file condition is detected, be sure to issue an "RC" command to release the Command ID used whenever file processing has been completed.
4. The command ID should not be changed during file processing.

Alternative Method—ADARUN Parameters

Parameter	Use	Minimum	Maximum	Default
PREFETCH PREFE	Indicate whether or not the PREFETCH feature is be used automatically.			NO

This parameter causes the ADABAS PREFETCH module to be loaded, executing the PREFETCH feature completely transparent to the user program.

This parameter and feature can only be used for user programs running in multi-user mode.

Example:

```
ADARUN PROG=USER.PREFETCH=YES
```

A user program is to be executed; the PREFETCH feature is to be used.

Parameter	Use	Minimum	Maximum	Default
PREFTBL	Indicate size of the PREFETCH buffer area (total buffer length)	6144	16M	30000

The amount of memory to be used for the PREFETCH buffer area.

Example:

```
ADARUN PROG=USER.PREFETCH=YES.PREFTBL=30000
```

A user program is to be executed; the PREFETCH feature is to be usedd; 30000 bytes are to be used for the total buffer area.